by experiment that the plants grow as well suspended from a raft by means of cloth strings as they do when attached naturally to the rocks by their own holdfasts. She found also that the removal of the holdfast and even of a considerable portion of the stipe does not affect the growth of the remainder of the plant. The removal of the tip of the blade produces only a negligible effect so long as the basal portion is left intact. Pieces of the blades even as small as 1 mm. square were found to grow when placed in a cloth bag attached to a raft. In kelps having a very short stipe it was found that the region of greatest growth in the post-juvenile stages is near the base of the blade, the main growth of the stipe occurring during the younger stages. She found that the kelps experimented upon grow almost twice as rapidly during the daytime as during the night.

The results reported coordinate well with the small degree of physiological specialization of parts that is found in such genera as *Laminaria* and other leaflike kelps. The data are interpreted largely from the viewpoint of their bearing on the location of the region of greatest growth. Only slight attention is given to the interpretation of the data in their relation to regeneration, and none at all to their relation to coordination.—GEORGE B. RIGG.

Taxonomic notes.—BRANDEGEE[22] has described new species in *Aristolochia* (2), *Jatropha*, *Lycium*, *Galvezia*, *Maximowiczia*, and *Orobanche* from Lower California; in *Aristolochia* and *Asclepias* from Mexico; and in *Sedum* and *Antirrhinum* from California.

MAXON,[23] in continuation of his studies of tropical American ferns, has presented three groups of *Polypodium*, "whose species have for the most part been greatly misunderstood." One of these groups is *P. trichomanoides* and its American allies, including a critical discussion of 26 species. Another group is *P. furfuraceum* and related species, including 21 species, 5 of which are new. The third group is *P. squammatum* and its allies, including 17 species, 5 of which are new. In addition to the new species in these groups, 5 additional new species of *Polypodium* are described, and 2 new species of *Notholaena*.

MILLSPAUGH,[24] in continuation of his studies of North American Euphorbiaceae, has recognized the following segregates from *Euphorbia: Chamaesyce* S. F. Gray, with 9 new species and 84 old ones; *Eumecanthus* Kl. and Gke., to which 41 species are transferred; *Aklema* Raf., to which 19 species are transferred. New species are also described in *Acalypha* (2), *Croton* (3), and *Tragia*.—J. M. C.

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[22] BRANDEGEE, T. S., Species novae vel minus cognitae. Univ. Calif. Publ. Bot. **6**:357–361. 1916.

[23] MAXON, WILLIAM R., Studies of tropical American ferns. no. 6. Contrib. U.S. Nat. Herb. **17**:541–608. *pls. 32–43.* 1916.

[24] MILLSPAUGH, C. F., Contributions to North American Euphorbiaceae VI. Publ. Field Mus. Nat. Hist. Bot. Series **2**:401–420. 1916.